

# **Isc N-Channel MOSFET Transistor**

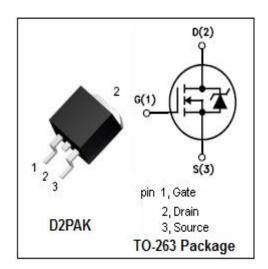
## **IRF520NS**

### • FEATURES

- · With To-263(D2PAK) package
- · Low input capacitance and gate charge
- · Low gate input resistance
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



Switching applications

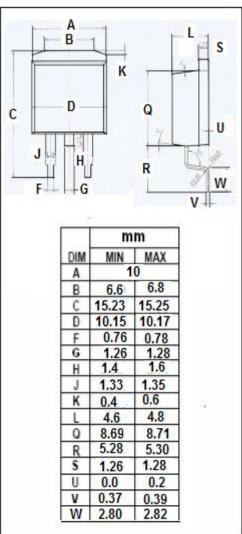


• ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DSS}$	Drain-Source Voltage	100	V
V <sub>GSS</sub>	Gate-Source Voltage	±20	V
I <sub>D</sub>	Drain Current-ContinuousTc=25℃ Tc=100℃	9.7 6.8	А
I <sub>DM</sub>	Drain Current-Single Pulsed	38	А
P <sub>D</sub>	Total Dissipation @Tc=25℃	48	W
$T_ch$	Max. Operating Junction Temperature	175	${\mathbb C}$
T <sub>stg</sub>	Storage Temperature	-55~175	$^{\circ}$

## • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER		UNIT	
Rth(ch-c)	Channel-to-case thermal resistance	3.1	°C/W	
Rth(ch-a)	) Channel-to-ambient thermal resistance 4		°C/W	



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### **ELECTRICAL CHARACTERISTICS**

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	ТҮР	MAX	UNIT
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V; I <sub>D</sub> = 0.25mA	100			V
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>DS</sub> =V <sub>GS</sub> ; I <sub>D</sub> =0.25mA	1.0		2.0	V
R <sub>DS(on)</sub>	Drain-Source On-Resistance	V <sub>GS</sub> = 10V; I <sub>D</sub> =5.7A			200	mΩ
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V;V <sub>DS</sub> = 0V			±0.1	μА
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =100V; V <sub>GS</sub> = 0V;Tj=25°C V <sub>DS</sub> =80V; V <sub>GS</sub> = 0V;Tj=125°C			25 250	μА
V <sub>SDF</sub>	Diode forward voltage	I <sub>SD</sub> =5.7A, V <sub>GS</sub> = 0 V			1.3	V

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